

REMARKS

Claims 1-11 were pending in this application and have been rejected. In this Response, claims 1, 3, 4, and 6 have been amended and claims 5 and 7-11 have been canceled. Applicants respectfully request reconsideration of the pending claims in view of the amendments and the following remarks.

Claim Objections

Claims 1, 3, and 6-10 were objected to for containing certain informalities. Applicants have amended these claims to correct the informalities as indicated by the Examiner. No new matter has been added to the claims. In view of these amendments, the claim objections may now be withdrawn.

§ 101 Rejections

Claims 1 and 7-11 were rejected under 35 USC § 101 as being directed to non-statutory subject matter. These claims have all been cancelled. This rejection may now be withdrawn.

§ 112 Rejections

Claim 6 stands rejected under 35 USC § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. Specifically, the Examiner asserts that claim 6 is unclear because it is directed to one category, i.e. a data processing system, but depends from claim 1, which is directed to a different category, i.e. a method, and thus does not further limit the preceding claim. Claim 6 has been amended to clarify the invention and convert the claim into independent form. Applicants submit that, in view of this amendment, the § 112 rejection may now be withdrawn.

§ 103 Rejections

Claims 1-11 stand rejected under 35 USC § 103 (a) as being unpatentable over O'Brien et al. (U.S. Patent No. 6,915,178), in view of Duret et al. (U.S. Patent No. 4,663,720). Applicants traverse this rejection.

O'Brien describes a method of manufacturing a dental prosthesis. The method includes a step of creating three-dimensional digital data corresponding to a patient's tooth structure and using this data to digitally design a dental prosthesis. O'Brien does not disclose a step of using the input data to generate control data representing a control surface that meets stability requirements for the prosthesis. O'Brien thus fails to describe all the steps of the present invention.

In paragraph 5.1 of the Office Action, it is asserted that Duret provides the teachings which are lacking from O'Brien. Specifically, the Office Action states "Duret et al. substantially teaches generating a control data output using a numerical control unit and providing an interference check used to select a best fit shape and size." (Office Action, p. 3). Since O'Brien and Duret are both directed to the manufacture of a dental prosthesis, the Office Action concludes that it would have been obvious to combine their teachings to arrive at the presently claimed invention. Applicants disagree.

Even in combination, O'Brien and Duret do not teach or suggest all the elements of the presently claimed invention. The numerical "control data" described by Duret in column 6, lines 35-38, is different from the "control data" recited in the present claims. In Duret, the "control data" refers to the data used to run the milling machine, i.e. instructions describing the movements of the machine tool to generate the desired shape. In the present claims, the term "control data" refers to a control surface that meets certain stability requirements for the prosthesis and can be used to determine whether the design that has been created violates any of these requirements. Neither O'Brien nor Duret describe displaying such a control surface to the user on a monitor together with the shape of the prosthesis, as is recited in the present claims. Having this data displayed together on the monitor enables the user to make a visual comparison of the prosthesis design to the control surface so that the user can quickly and easily check if modifications being made to the design satisfy the minimum stability requirements of the prosthesis. By showing the user how a given modification might violate minimum stability requirements, the user can

control and direct the manner in which such violations are avoided. This approach provides a substantial advantage over systems that use an automatic correction performed by the computer, because it allows the user to maintain control over the final design to ensure, for example, that it retains an aesthetically pleasing appearance.

In summary, since O'Brien and Duret both fail to teach or suggest (i) displaying the control surface together with the design on the monitor, (ii) modification of the design based on a visual comparison of the displayed design data and the displayed control surface, and (iii) displaying the modified design on the monitor together with control surface, the present invention is clearly patentable over these references. Applicants, therefore, request that the § 103 rejection be withdrawn.

CONCLUSION

In view of the above, it is submitted that the application is in condition for allowance. Examination and reconsideration of the application as amended is requested.

Respectfully submitted,

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